

## **REMARKS**

### **I. Applicants' Invention and Preliminary Comments.**

Applicants' invention relates to compounds that possess one or more ionic hydrophobic chemical moieties spatially located so as to mimic the spatial location of at least an ionic or hydrophobic amino acid residue of insulin." That is, Applicants have designed compounds of the present invention which mimic insulin and interact with the insulin binding site of the insulin receptor.

Claims 1, 6, 8, 10, 20, 22-25, 32, 37, 39, and 41-47 have been amended to address the §112 rejections presented in the Outstanding Action, to recite proper Markush language, and to expedite allowance of those claims. No new matter is introduced thereby. The Applicants do not intend by these or any other amendments to abandon the subject matter of any claim as originally presented, and reserve the right to pursue such subject matter in other applications, such as continuing applications and divisional applications.

### **II. Outstanding Rejections**

Claims 1-10, 16, 17, 20-25 and 32-47 stand rejected under 35 U.S.C. §112 (first and second paragraph).

Claims 1-10, 16, 17, 20-25 and 32-47 stand rejected under 35 U.S.C. §102(a) over Sportsman et al. U.S. Patents 5,851,988 ("Sportsman I") and 6,329,431 ("Sportsman II").

### **III. Patentability Arguments**

#### **A. The Rejection Under 35 U.S.C. §112 should be withdrawn.**

The lack of enablement rejection should be withdrawn because claims 1 and 32 have been amended in accordance with the Patent Office's suggestions. Specifically, claim 1, which refers to agonists, has been amended to relate to hyperglycaemic conditions. The ability to treat hyperglycaemic conditions with an insulin agonist finds support in the specification at pages 63-68. Thus, for this reason, the specification should be considered enabling for one skilled in the art to make and use an agonist to treat a hyperglycaemic condition.

Similarly, claim 32 which relates to antagonists, has been amended to relate hypoglycaemic conditions. The ability to treat hypoglycaemic conditions with an insulin antagonist finds support in the specification at pages 55-63. Thus, for this reason, the specification should be considered enabling for one skilled in the art to make and use an antagonist to treat a hypoglycaemic condition.

In addition, claims 1, 6, 8, 10, 20, 22-25, 32, 37, 39 and 41-47 have been amended to correct the Markush language in accordance with the Patent Office's suggestion. Claims which depend on claims 1 and 32 are therefore deemed proper. The amended claims are now in accordance with the Examiner's suggestions and it is submitted that the rejection for lack of enablement and indefiniteness should be withdrawn and each of claims 1-10, 16, 17, 20-25 and 32-47 should be allowed.

**B. The Rejections Under 35 U.S.C. §102(a) over Sportsman I and II Should be Withdrawn.**

**1. Claims 1-10, 16, 17, 20-25 and 32-47 Define Novel Subject Matter over Sportsman I.**

The anticipation rejection of claims 1-10, 16, 17, 20-25 and 32-47 under 35 U.S.C. §102(a) over Sportsman I should be withdrawn because Sportsman I do not disclose compounds that possess one or more ionic or hydrophobic amino acid residue of insulin as the Patent Office suggests much less that such compounds mimic insulin or interact with the insulin binding site.

Instead Sportsman I discloses that the compounds interact with a site located on the kinase portion of the insulin receptor (*See Sportsman I, column 8, lines 27-29*). Accordingly, claims 1-10, 16, 17, 20-25 and 32-47 are novel over Sportsman I and should be allowed.

**2. Claims 1-10, 16, 17, 20-25 and 32-47 Define Novel Subject Matter over Sportsman II.**

The anticipation rejection of claims 1-10, 16, 17, 20-25 and 32-47 under 35 U.S.C. §102(a) over Sportsman II should be withdrawn because Sportsman II do not disclose compounds that possess one or more ionic or hydrophobic amino acid residue of insulin as the Patent Office suggests much less that such compounds mimic insulin or interact with the insulin binding site.

Instead Sportsman II discloses that compounds are able to directly activate the kinase portion of the insulin receptor (*See Sportsman II, column 4, line 24*) and that stimulation of receptor activity is independent of the peptide hormone binding site (*See Sportsman II, column 2, lines 3-6*). Accordingly, claims 1-10, 16, 17, 20-25 and 32-47 are novel over Sportsman II and should be allowed.

### **CONCLUSION**


For all of the foregoing reasons, the applicant's respectfully request that the rejections should now be withdrawn and an early notice of allowance of all pending claims is respectfully solicited. Should the Examiner wish to discuss any issues of form or substance in order to expedite allowance of the pending application, she is invited to contact the undersigned agent at the number indicated below.

If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully Submitted,

**MARSHALL, GERSTEIN & BORUN**  
6300 Sears Tower  
233 S. Wacker Drive  
Chicago, Illinois 60606-6402  
(312) 474-6300

By: \_\_\_\_\_

  
Mark H. Hopkins, Ph.D.  
Registration No. 44,775

November 17, 2003